Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 82 (previously cancelled)

83. (currently amended) A microsomal preparation ~~comprising a recombinant protein expressed by~~ of a cell that has been transfected with a nucleic acid molecule encoding ~~the~~ a protein, or of ~~by~~ a descendent cell thereof, wherein said protein oxidizes all-*trans* retinoic acid at the C4-position of the ß-ionone ring, said nucleic acid molecule comprising a nucleotide sequence that hybridizes under high stringency conditions, wherein high stringency conditions include a wash step of about 0.2 x SSC at 65°C ~~50°C~~, to a polynucleotide having a nucleotide sequence ~~selected from the group of sequences~~ shown as: SEQ ID NO:3~~; SEQ ID NO:5; and SEQ ID NO:31; and wherein the microsomal preparation is substantially free of other proteins that are cytochromes expressed by epidermal cells~~, said microsomal preparation comprising said protein.

Claims 84 to 89 (previously cancelled)

90. (currently amended) A microsomal preparation ~~comprising a recombinant protein expressed by~~ of a cell that has been transfected with a nucleic acid molecule encoding ~~the~~ a protein, or of ~~by~~ a descendent cell thereof, wherein said protein hydroxylates all-*trans* retinoic acid at the C4-position of the ß-ionone ring, said nucleic acid molecule comprising a nucleotide sequence that hybridizes under high stringency conditions, wherein high stringency conditions include a wash step of about 0.2 x SSC at 65°C ~~50°C~~, to a nucleic acid molecule having a nucleotide sequence ~~selected from the group of sequences~~ shown as: SEQ ID NO:3~~; SEQ ID NO:5; and SEQ ID NO:31; and wherein the microsomal preparation is substantially free of other proteins that are cytochromes expressed by epidermal cells~~, said microsomal preparation comprising said protein.

Claims 91 to 112 (previously cancelled)

Claims 113 to 117 (cancelled)

118. (currently amended) The preparation of claim 83 ~~113~~, wherein the protein comprises the amino acid sequence identified as SEQ ID NO:2.

Claims 119 to 128 (cancelled)

129. (currently amended) The preparation of claim 83 ~~128~~, wherein the nucleic acid molecule encodes an amino acid sequence that is at least 95 percent conserved with respect to SEQ ID NO:2~~, SEQ ID NO:4, or SEQ ID NO:32~~.

130. (currently amended) The preparation of claim 83, wherein the protein additionally hydroxylates the C18-position of all-*trans* retinoic acid.

Claims 131 to 139 (cancelled)

140. (currently amended) The preparation of claim 90 ~~139~~, wherein the nucleic acid molecule encodes an amino acid sequence that is at least 95 percent conserved with respect to SEQ ID NO:2~~, SEQ ID NO:4, or SEQ ID NO:32~~.

141. (currently amended) The preparation of claim 90, wherein the protein additionally hydroxylates the C18-position of all-*trans* retinoic acid.

142. (currently amended) A microsomal preparation ~~comprising a recombinant protein expressed by~~ of a cell that has been transfected with a nucleic acid molecule encoding ~~the~~ a protein, or of ~~by~~ a descendent cell thereof, wherein said protein oxidizes all-*trans* retinoic acid at the C4-position of the ß-ionone ring, said nucleic acid molecule encoding an amino acid sequence that is at least ~~60~~ 95 percent conserved with respect to SEQ ID NO:2~~, SEQ ID NO:4, or SEQ ID NO:32, and wherein the microsomal preparation is substantially free of other proteins that are cytochromes expressed by epidermal cells~~, said microsomal preparation comprising said protein.

Claims 143 to 148 (cancelled)

149. (currently amended) The preparation of claim 142, wherein the protein additionally hydroxylates the C18-position of all-*trans* retinoic acid.

150. (currently amended) A microsomal preparation ~~comprising a recombinant protein expressed by~~ of a cell that has been transfected with a nucleic acid molecule encoding ~~the~~ a protein, or of ~~by~~ a descendent cell thereof, wherein said protein hydroxylates all-*trans* retinoic acid at the C4-position of the ß-ionone ring, said nucleic acid molecule encoding an amino acid sequence that is at least ~~60~~ 95 percent conserved with respect to SEQ ID NO:2~~, SEQ ID NO:4, or SEQ ID NO:32, and wherein the microsomal preparation is substantially free of other proteins that are cytochromes expressed by epidermal cells~~, said microsomal preparation comprising said protein.

Claims 151 to 156 (cancelled)

157. (currently amended) The preparation of claim 150, wherein the protein additionally hydroxylates the C18-position of all-*trans* retinoic acid.

Claims 158 to 161 (cancelled)